

IN THE CLAIMS:

Please amend claims 13, and 15-20, and cancel claim 14 as follows:

1-12 (Cancelled)

13. (Currently Amended) An optical disk method for recording information on an optical disk, based on a mark-length recording scheme, comprising:

forming pits sequentially from an inner circumference to an outer circumference of the optical disk by a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk; and

performing tracking control, ~~during said step of forming~~ while forming said pits, by offsetting a center of an optical axis of the light beam, by a ~~continuously~~ repeatedly calculated amount, from a center line of the track toward the outer circumference of the optical disk, the ~~continuously~~ repeatedly calculated amount being such that pit forming efficiencies of the inner and outer circumference sides of the track relative to the ~~offset~~ light beam are balanced.

14. (Cancelled)

15. (Currently Amended) An optical disk recording device for recording information on an optical disk, based on a mark-length recording scheme, by forming pits sequentially from an inner circumference to an outer circumference of the optical disk by a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk, said optical disk recording device comprising:

an optical pickup that irradiates the light beam onto the track of the optical disk for recording information and follows the track according to a tracking error signal;

a tracking signal generating section that outputs the tracking error signal by continuously detecting a reflected light reception signal resulting from the tracking

error signal during a particular period from a given time point to a subsequent time point, wherein the given time point is within a recording signal ON period, after formation of a pit is initiated in response to turning on a recording pulse signal, and after the reflected light reception signal from the optical disk passes a peak level, wherein the subsequent time point is within a recording signal OFF period and before the recording pulse signal is next turned on, and during an other period other than said particular period, by holding a level of the reflected light reception signal detected immediately before said other period or outputting a zero-level tracking error signal as a tracking signal;

a storage circuit that stores information of the given time point associated with recording conditions;

a sampling pulse generating circuit that generates a sampling pulse corresponding to the particular period; and

a control circuit that reads out the given time point information associated with the recording conditions from the storage circuit, sets the given time point information to the sampling pulse generating circuit for obtaining the sampling pulse, and controls the optical pickup to form pits for recording information following the track according to the tracking error signal output by the tracking signal generating section, said tracking error signal having a tracking offset value ~~continuously~~ repeatedly calculated and corresponding to a tracking offset amount such that pit forming efficiencies of the inner and outer circumference sides of the track relative to the ~~offset~~ light beam are balanced.

16. (Currently Amended) An optical disk recording device for recording

information on an optical disk, based on a mark-length recording scheme, by forming pits sequentially from an inner circumference to an outer circumference of the optical disk by a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk, said optical disk recording device comprising:

an optical pickup that irradiates the light beam onto the track of the optical disk for recording information and follows the track according to a tracking error signal;

a tracking signal generating section that outputs the tracking error signal by detecting, using a sample and hold circuit, a reflected light reception signal resulting from the tracking error signal during a particular period from a given time point to a subsequent time point, wherein the given time point is within a recording signal ON period, after formation of a pit is initiated in response to turning on a recording pulse signal, and after the reflected light reception signal from the optical disk passes a peak level, wherein the subsequent time point is within a recording signal OFF period and before the recording pulse signal is next turned on, and during an other period other than said particular period, by holding a level of the reflected light reception signal detected immediately before said other period or outputting a zero-level tracking error signal as a tracking signal;

a sampling pulse generating circuit that generates a sampling pulse, corresponding to the particular period and the given time point, for the sample and hold circuit ; and

a control circuit that reads out the given time point information associated with the recording conditions from a storage circuit, sets the given time point information to the sampling pulse generating circuit for obtaining the sampling pulse, and controls

the optical pickup to form pits for recording information following the track according to the tracking error signal output by the tracking signal generating section, said tracking error signal having a tracking offset value ~~continuously~~ repeatedly calculated and corresponding to a tracking offset amount such that pit forming efficiencies of the inner and outer circumference sides of the track relative to the ~~offset~~ light beam are balanced.

17. (Currently Amended) An optical disk method for recording information on an optical disk, based on a mark-length recording scheme, comprising:

forming pits sequentially from an inner circumference to an outer circumference of the optical disk by a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk; and

performing tracking control, ~~during said step of forming~~ while forming said pits, by offsetting a center of an optical axis of the light beam, by a ~~continuously~~ repeatedly calculated amount, from a center line of the track toward the outer circumference of the optical disk, the ~~continuously~~ repeatedly calculated amount being such that a tendency towards formation of a pit on an inner circumference side of the track due to heat remaining in an adjacent inner circumference track is minimized and the pit is accurately formed on the center line of the track.

18. (Currently Amended) An optical disk recording device for recording information on an optical disk, based on a mark-length recording scheme, by forming pits sequentially from an inner circumference to an outer circumference of the optical disk by a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk, said optical disk recording device comprising:

an optical pickup that irradiates the light beam onto the track of the optical disk for recording information and follows the track according to a tracking error signal;

a tracking signal generating section that outputs the tracking error signal by continuously detecting a reflected light reception signal resulting from the tracking error signal during a particular period from a given time point to a subsequent time point, wherein the given time point is within a recording signal ON period, after formation of a pit is initiated in response to turning on a recording pulse signal, and after the reflected light reception signal from the optical disk passes a peak level, wherein the subsequent time point is within a recording signal OFF period and before the recording pulse signal is next turned on, and during an other period other than said particular period, by holding a level of the reflected light reception signal detected immediately before said other period or outputting a zero-level tracking error signal as a tracking signal;

a storage circuit that stores information of the given time point associated with recording conditions;

a sampling pulse generating circuit that generates a sampling pulse corresponding to the particular period; and

a control circuit that reads out the given time point information associated with the recording conditions from the storage circuit, sets the given time point information to the sampling pulse generating circuit for obtaining the sampling pulse, and controls the optical pickup to form pits for recording information following the track according to the tracking error signal output by the tracking signal generating section, said tracking error signal having a tracking offset value ~~continuously~~ repeatedly

calculated and corresponding to a tracking offset amount such a tendency towards formation of a pit on an inner circumference side of the track due to heat remaining in an adjacent inner circumference track is minimized and the pit is accurately formed on the center line of the track.

19. (Currently Amended) An optical disk method for recording information on an optical disk, based on a mark-length recording scheme, comprising:

forming pits sequentially from an inner circumference to an outer circumference of the optical disk by a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk; and

performing tracking control, ~~during said step of forming~~ while forming said pits, by offsetting a center of an optical axis of the light beam, by a ~~continuously~~ repeatedly calculated amount, from a center line of the track toward the outer circumference of the optical disk, the ~~continuously~~ repeatedly calculated amount being such that a tendency towards formation of a pit on an inner circumference side of the track due to heat remaining in an adjacent inner circumference track is minimized and the pit is accurately formed on the center line of the track, wherein the optical disk is a write-once optical disk.

20. (Currently Amended) An optical disk recording device for recording information on an optical disk, based on a mark-length recording scheme, by forming pits sequentially from an inner circumference to an outer circumference of the optical disk by a light beam irradiated onto a track formed as a groove or land on a recording surface of the optical disk, said optical disk recording device comprising:

an optical pickup that irradiates the light beam onto the track of the optical disk for recording information and follows the track according to a tracking error signal;

a tracking signal generating section that outputs the tracking error signal by continuously detecting a reflected light reception signal resulting from the tracking error signal during a particular period from a given time point to a subsequent time point, wherein the given time point is within a recording signal ON period, after formation of a pit is initiated in response to turning on a recording pulse signal, and after the reflected light reception signal from the optical disk passes a peak level, wherein the subsequent time point is within a recording signal OFF period and before the recording pulse signal is next turned on, and during an other period other than said particular period, by holding a level of the reflected light reception signal detected immediately before said other period or outputting a zero-level tracking error signal as a tracking signal;

a storage circuit that stores information of the given time point associated with recording conditions;

a sampling pulse generating circuit that generates a sampling pulse corresponding to the particular period; and

a control circuit that reads out the given time point information associated with the recording conditions from the storage circuit, sets the given time point information to the sampling pulse generating circuit for obtaining the sampling pulse, and controls the optical pickup to form pits for recording information following the track according to the tracking error signal output by the tracking signal generating section, said tracking error signal having a tracking offset value ~~continuously~~ repeatedly

calculated and corresponding to a tracking offset amount such a tendency towards formation of a pit on an inner circumference side of the track due to heat remaining in an adjacent inner circumference track is minimized and the pit is accurately formed on the center line of the track, wherein the optical disk is a write-once optical disk.